



**State of Louisiana**

**Coastal Protection and Restoration Authority  
of Louisiana**

## **Monitoring Plan**

for

**Goose Point / Point Platte Marsh  
Creation (PO-33)**

State Project Number PO-33  
Priority Project List 13

March 2013



Prepared by:

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The Coastal Protection and Restoration Authority of Louisiana (CPRA) and the United States Fish and Wildlife Service (USFWS) agree to carry out the terms of this Monitoring Plan (hereinafter referred to as the “Plan”) of the accepted, completed project features in accordance with the Cost Sharing Agreement No. 2511-04-10 executed on 12/26/13. The CSA will be included in the Operations and Maintenance (O&M) Plan, along with the construction completion report, the project permits, and the O&M budget. The Monitoring Plan the O&M Plan will be available on the CPRA Document Referencing System ([http://sonris-www.dnr.state.la.us/sundown/cart\\_prod/cart\\_bms\\_avail\\_documents\\_f](http://sonris-www.dnr.state.la.us/sundown/cart_prod/cart_bms_avail_documents_f)).

The project features covered by this plan are inclusive of and are identified as the Goose Point/Point Platte Marsh Creation (PO-33). The intention of the provisions of this Plan is to monitor the project using standardized data collection techniques and to analyze that data to determine whether the project is achieving the anticipated benefits. Reports will be generated and recommendations made to adaptively manage the project.

Construction of the Goose Point/Point Platte Marsh Creation (PO-33) was authorized by Section 303(a) of Title III Public Law 101-646, the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) enacted on November 29, 1990, as amended. The Goose Point/Point Platte Marsh Creation (PO-33) was approved on the 13<sup>th</sup> Priority Project List.

## 1. **PROJECT DESCRIPTION, PURPOSE, GOALS, and FEATURES**

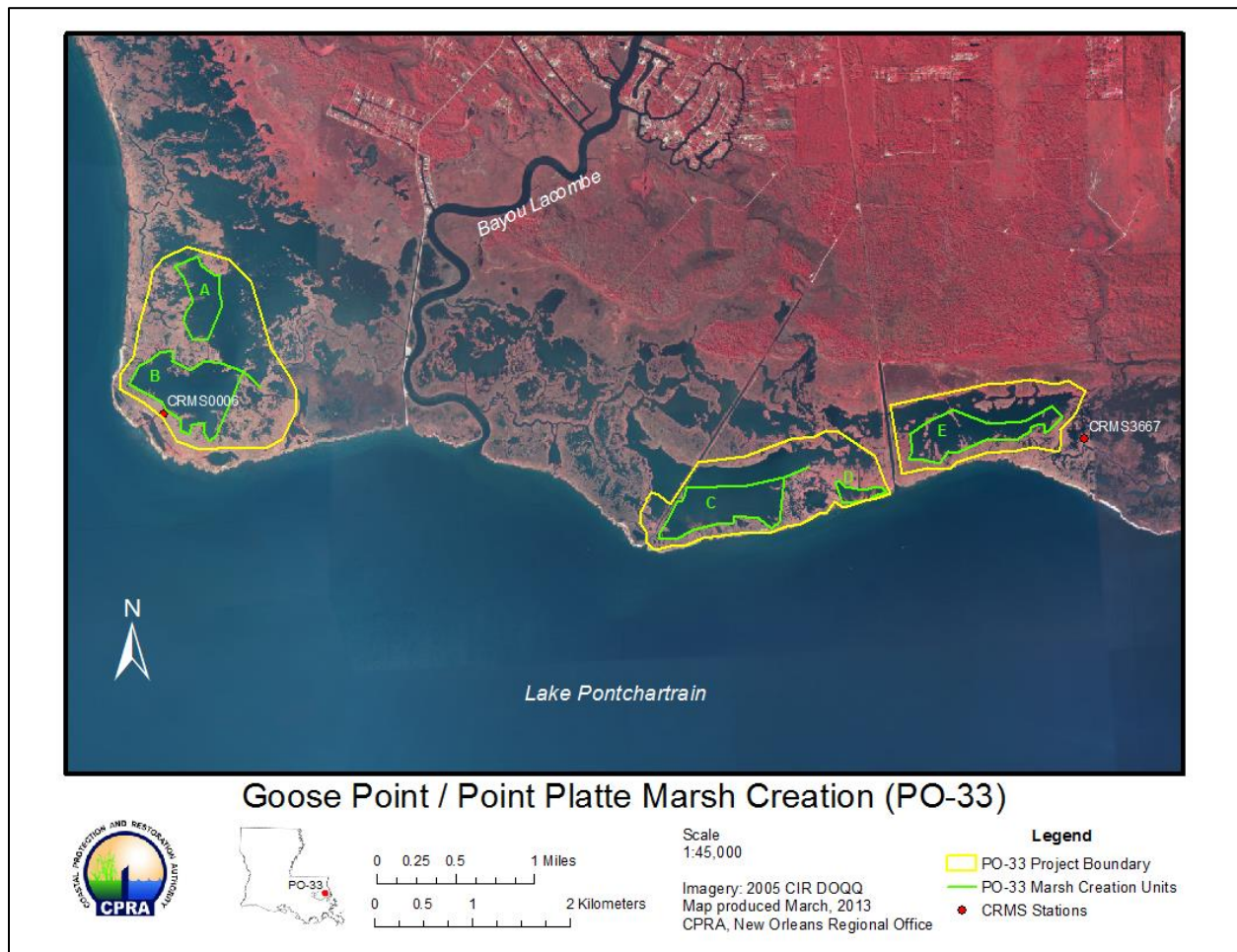
### **Description**

The Goose Point/Point Platte Marsh Creation (PO-33) project is located in St. Tammany Parish, Louisiana. The project follows the northern rim of Lake Pontchartrain between Fontainebleau State Park and Hwy 11, within Big Branch National Wildlife Refuge (Figure 1) in St. Tammany Parish, Louisiana.

Major contributing factors to wetland loss in the area include interior ponding and shoreline erosion (Segura 2003). In 2000, the 1384-ac project area consisted of 715 acres of brackish marsh and 669 acres of open water (Segura 2003). Wetland loss rates from 1956 to 1978 were estimated at 31.3 acres/year and 10.42 acres/year for Goose Point and Point Platte, respectively (McCarty 2001). Those estimates were the highest rates recorded to date and can be contributed to hydrologic alterations such as the construction of Lake Road and two large pipeline canals. These alterations allowed saltwater to penetrate the sawgrass marshes creating ponds as the community transitioned to a brackish marshhay cordgrass (*Spartina patens*) wetland (McCarty 2001). More recently, McCarty (2001) estimated loss rates around 6.42 acres/year and 5.54 acres/year for Goose Point and Point Platte, respectively, during 1978 to 1995.

Sediment will be hydraulically dredged from borrow areas in Lake Pontchartrain and placed in open water areas to create approximately 417 acres of emergent marsh. After compaction, dewatering, and settlement, the marsh platform is anticipated to reach an elevation of +1.08 ft NAVD-88 approximately three years post-construction and remain above the mean low water elevation of +0.48 ft NAVD-88 for the remainder of the 20-

year project life (Simoneaux 2006). Created marsh areas will be planted with *Spartina alterniflora* after settlement and dewatering for the purpose of stabilizing the marsh platforms.



**Figure 1.** Goose Point/Point Platte Marsh Creation (PO-33) project location and features.

### Purpose

The purpose of this project is to replace eroded marsh, nourish existing marsh, and to prevent breaching of the lake rim shoreline. Although shoreline erosion rates are lower than previously recorded, very little land remains to protect the interior wetlands from Lake Ponchartrain (Brass 2006).

### Goals

The goals of this project are to 1.) Create 417 acres of intertidal habitat suitable for marsh establishment at construction and 2.) nourish 149 acres of existing emergent marsh.

The introduction and placement of sediments through the use of dedicated dredging is consistent with the Louisiana’s Comprehensive Master Plan for a sustainable Coast (CPRA 2012).

**Features**

The as-built principal project features include approximately 417 acres of new marsh fill which was placed in 5 Marsh Fill Areas (Figure 1, Table 1), along with 49,577 linear feet of earthen perimeter containment dikes. Fill materials were dredged from two designated borrow areas in Lake Pontchartrain, while containment dikes were constructed using in situ materials from the fill areas.

Project construction began on April 1, 2008 and was completed on January 27, 2009. Project life is estimated to be 20 years. Annual project inspections are planned.

**Table 1.** Volume of dredged material and acreages of marsh creation/nourishment for fill areas A-E of the Goose Point/Point Platte Marsh Creation (PO-33) project.

Fill Area	Dredge Material (yd <sup>3</sup> )	Marsh Created (ac.)	Marsh Nourished (ac.)
A	479,903	64	23
B	949,700	125	77
C	863,176	120	49
D	149,370	13	6
E	658,770	95	
<b>Total</b>	<b>3,100,919</b>	<b>417</b>	<b>155</b>

**2. ITEMS REQUIRING MONITORING**

The Coast-wide Reference Monitoring System (CRMS) - *Wetlands* is a network of 392 monitoring sites distributed throughout the coastal zone of Louisiana. Hydrographic, vertical accretion, elevation change, vegetation, and soils, and aerial photography data are collected at each CRMS site. Aerial photography is also acquired for CRMS stations. No CRMS monitoring stations are located in the PO-33 project area. However, there are two CRMS stations in the vicinity. CRMS0006 is located immediately adjacent to Fill Area B; CRMS3667 is located near Fill Area E. While the CRMS stations fall outside of the project boundaries, they will still be useful for evaluation due to their proximity to the project.

Additional project-specific monitoring was added to help evaluate success. The following monitoring strategies will provide the information necessary to evaluate the specific goals of restoring/creating approximately 417 acres and nourish approximately 149 acres of emergent marsh.



- A. Aerial Photography - In order to evaluate land/water ratios in the project area, land/water data will be obtained from digital imagery (Z/I Imaging digital mapping camera) with 1-meter resolution. The photography will be georectified using standard operating procedures described in Steyer et al. (1995, revised 2000), and land/water ratios will be determined. Aerial photography will be captured using CRMS coastwide flights in 2012, 2020, and 2029 (or approximate project years 1, 10, and 20).

### **3. MONITORING BUDGET**

The cost associated with the Monitoring this project, as outlined in Section 4 of this plan for the twenty (20) year project life is summarized in Attachment I.

### **4. RESPONSIBILITIES**

A. CPRA will:

1. Coordinate and oversee all scientific data collection.
2. Ensure that all data goes through quality control procedures and is entered into the public database.
3. Analyze the data and report on the status of the project every three years, or as otherwise directed by USFWS. Should the data indicate that the project is not meeting the goals and objectives, adaptive management recommendations will be made to improve the response.
4. Review the monitoring plan and budget annually with the USFWS to determine that the data being collected adequately evaluate the project.

B. USFWS will:

1. Review the monitoring plan and budget annually to determine that the data being collected adequately evaluates the project.

## REFERENCES

- Brass, A. Y. 2006. Ecological Review: Goose Point/Point Platte Marsh Creation. Louisiana Department of Natural Resources. Baton Rouge, Louisiana. 11pp.
- Coastal Protection and Restoration Authority of Louisiana. 2012. *Louisiana's Comprehensive Master Plan for a Sustainable Coast*. Coastal Protection and Restoration Authority of Louisiana. Baton Rouge, LA.
- Folse, T. M., J. L. West, M. K. Hymel, J. P. Troutman, L. A. Sharp, D. Weifenbach, T. McGinnis, and L. B. Rodrigue. 2008 (revised 2012). A Standard Operating Procedures Manual for the Coast-wide Reference Monitoring System-*Wetlands: Methods for Site Establishment, Data Collection, and Quality Assurance/Quality Control*. Louisiana Coastal Protection and Restoration Authority, Office of Coastal Protection and Restoration. Baton Rouge, LA. 191 pp.
- McCarty, P. V. 2001. The Genesis of the Big Branch Coastal Wetlands: The Geologic and Geomorphic Evolution of the Bayou LaCombe Area, Late Pleistocene to the Present. Master's Thesis, Department of Geology, University of New Orleans. New Orleans, Louisiana.
- Segura, M. 2003. Wetland Value Assessment: Goose Point/Point Platte Marsh Creation (PO-33) Project. U.S. Fish and Wildlife Service. Lafayette, Louisiana. 9pp.
- Simoneaux, R. 2006. Final Design Report: Goose Point/Point Platte Marsh Creation (PO-33) Project. Louisiana Department of Natural Resources. Baton Rouge, Louisiana. 15 pp. plus appendices
- Steyer, G.D., R.C. Raynie, D.L. Steller, D. Fuller, and E. Swenson. 1995 (revised 2000). Quality management plan for the Coastal Wetlands Planning, Protection, and Restoration Act monitoring program. Open-file series no. 95-01 (Revised June 2000). Baton Rouge: Louisiana Department of Natural Resources, Coastal Restoration Division. 97 pp.

# ATTACHMENT I PROJECT BUDGET

PO-33 Goose Point/Point Platte Marsh Creation																						
Infl. Rate Price Level		Monitoring Budget \$ 111,665																				
2012 Round Trip Mileage																						
	Rates	Expended Dollars	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<u>Daily Rate Items</u>																						
Base Field Equipment																						
14' Pirogue																						
20' Aluminum																						
Three Man Crew																						
3 Man Lodging																						
3 Man Per Diem																						
Vehicle																						
<u>Annual Rate Items</u>																						
Misc. Supplies																						
Computer Database																						
Monitoring Progress Report																						
Comprehensive Monitoring Report																						
TAG Meetings																						
Quality Assurance																						
*Aerial Photography																						
Monitoring Plan Dev.																						
	Rates	Expended Dollars	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<u>Daily Rate Items</u>																						
Base Field Equipment																						
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Monitoring Progress Report																						
Comprehensive Monitoring Report																						
TAG Meetings																						
Quality Assurance																						
*Aerial Photography																						
Monitoring Plan Dev.																						
DNR Expenditures To Date																						
*Other Federal Expenditures																						
<b>Total</b>		0.00	0.00	0.00	29,890.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36,704.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45,070.75	0.00
<b>Projected - Running Total</b>			0.00	0.00	29,890.76	29,890.76	29,890.76	29,890.76	29,890.76	29,890.76	29,890.76	29,890.76	66,594.97	66,594.97	66,594.97	66,594.97	66,594.97	66,594.97	66,594.97	66,594.97	111,665.73	111,665.73
<b>Projected Grand Total</b>		111,665.73																				

